Asheville Area
Metropolitan Planning Organization

2025
Long Range
Transportation Plan

Adopted July 2001

By the Transportation Advisory Committee

ACKNOWLEDGEMENTS

Land-of-Sky Regional Council Transportation Options for Western North Carolina

AAMPO Thoroughfare Plan

City of Asheville Pedestrian Thoroughfare Plan

AAMPO Pedestrian and Bicycle Thoroughfare Plan

City of Fayetteville Long Range Transportation Plan

City of Fredericksburg Long Range Transportation Plan

City of Asheville 2010 Plan

Phase I Environmental Analysis – Asheville Urban Area

The Riverfront Plan

The Asheville Regional Airport Master Plan

Town of Woodfin Thoroughfare Plan

Town of Fletcher US 25 Corridor Study

Town of Black Mountain and Montreat Thoroughfare Plan

Town of Weaverville Pedestrian Plan

The Asheville Greenways Master Plan

Maurizia Chapman, Fayetteville MPO
Deborah Hutchings, PE, NCDOT
David Wasserman, NCDOT
Beverly Williams, NCDOT
Linda Giltz, Land-of-Sky Regional Council
Elizabeth Teague, Town of Fletcher (Formerly of Land-of-Sky Regional Council)
Shannon Aiken, City of Asheville
Dan Baechtold, AICP, City of Asheville
Cathy Ball, PE, City of Asheville
Bruce Black, City of Asheville
Jeffrey Burns, City of Asheville
Oliver Gajda, City of Asheville
Ed Hutchinson, AICP, City of Asheville
Michael Moule, PE, City of Asheville
Scott Shuford, AICP, City of Asheville
Market Connections, Inc.

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TRANSPORTATION ACRONYMS

AAMPO**:** *Asheville Area Metropolitan Planning Organization*

AASHTO: *American Association of State Highway and Transportation Officials*
AASHTO develops guidelines and standards for road design, including bicycle and pedestrian facilities.

ADA: *Americans with Disabilities Act*
This Act requires that disabled persons be accommodated in the public right-of-way and when using public services like transit.

AVL: *Asheville Regional Airport*

BTF: *Bikeways Task Force*
The BTF is a citizen advisory group to the TAC, which makes recommendations for improving bicycle infrastructure and safety.

C-TAG: *Citizen Transportation Advisory Group*
The TAG was a citizen advisory group to the TAC, which was established to help develop the MPO Thoroughfare Plan. However, this group has discontinued meeting in order for the MPO to develop a more effective public involvement process for developing the Thoroughfare Plan.

FY: *Fiscal Year*
The Local Municipal and State fiscal year is July 1 to June 30th, while the Federal fiscal year is October 1 to September 30th. FY references in this plan are to July 1 to June 30th.

FHWA: *Federal Highway Administration*

GIS: *Geographic Information Systems*
Database and mapping software, which is used in Transportation Planning

ISTEA: *Intermodal Surface Transportation Efficiency Act*
This has been re-authorized and expanded as TEA-21.

ITS: *Intelligent Transportation System*
ITS is the use of technology to monitor traffic flow and transit operations with the intention of identifying problem areas and improving system efficiency.

LRTP: *Long-Range Transportation Plan*

MTIP: *Metropolitan Transportation Improvement Program*
The MTIP is the list of local projects, which are being requested for inclusion in the State TIP.

MPO: *Metropolitan Planning Organization*
The Asheville MPO is one of 17 Metropolitan Planning Organizations designated by the Department of Transportation in North Carolina. MPO's make recommendations for road improvements to NCDOT and provide local transportation planning services. The Asheville MPO covers the area of Buncombe County and the Northern tip of Henderson County (the Regional Airport area and the Town of Fletcher).

NCDOT: *North Carolina Department of Transportation*
The central office for NCDOT is in Raleigh. The state is also divided into 14 Divisions which each have their own local DOT office and which provide local DOT services.

PTF: *Pedestrian Task Force*
The PTF is a citizen advisory group, which focuses on pedestrian safety and facilities. They make recommendations for sidewalks to be included in new road developments or in widening projects as appropriate, and make sure that pedestrian needs and safety are considered in transportation planning.

STIP: *State Transportation Improvement Program*
The STIP list is a statewide list of new road and existing road improvements needs which is updated by NCDOT each year based on recommendations from the TAC, TCC, BTF, and PTF. The TIP is revised every two years, but may contain project requests which are budgeted for many years to come. Also referred to as the TIP

TAC: *Transportation Advisory Committee*
The TAC is the governing board of the MPO. It consists of elected officials from the local governments within the MPO planning area. The local governments represented in the Asheville MPO are: Asheville, Biltmore Forest, Black Mountain, Buncombe County, Fletcher, Weaverville, and Woodfin.

TAZ: *Traffic Analysis Zone*
A designated area used as a unit of analysis for traffic patterns and traffic generation.

TCC: *Transportation Coordinating Committee*
The TCC is the technical advisory committee to the TAC. It consists of town managers and staff, as well as transit and other transportation planners.

TEA-21: *Transportation Equity Act for the 21st Century*
Federal act providing states with money and guidelines for transportation.

TIP: *Transportation Improvement Program*
The TIP list is a statewide list of new road and existing road improvements needs which is updated by NCDOT each year. In the AAMPO, the update is based on recommendations from the TAC, TCC, BTF, and PTF. The TIP is revised every two years, but may contain project requests which are budgeted for many years to come. Also referred to as the STIP

USDOT: *United States Department of Transportation*
The USDOT is the Federal DOT which sets standards and allocates federal funding to the states.

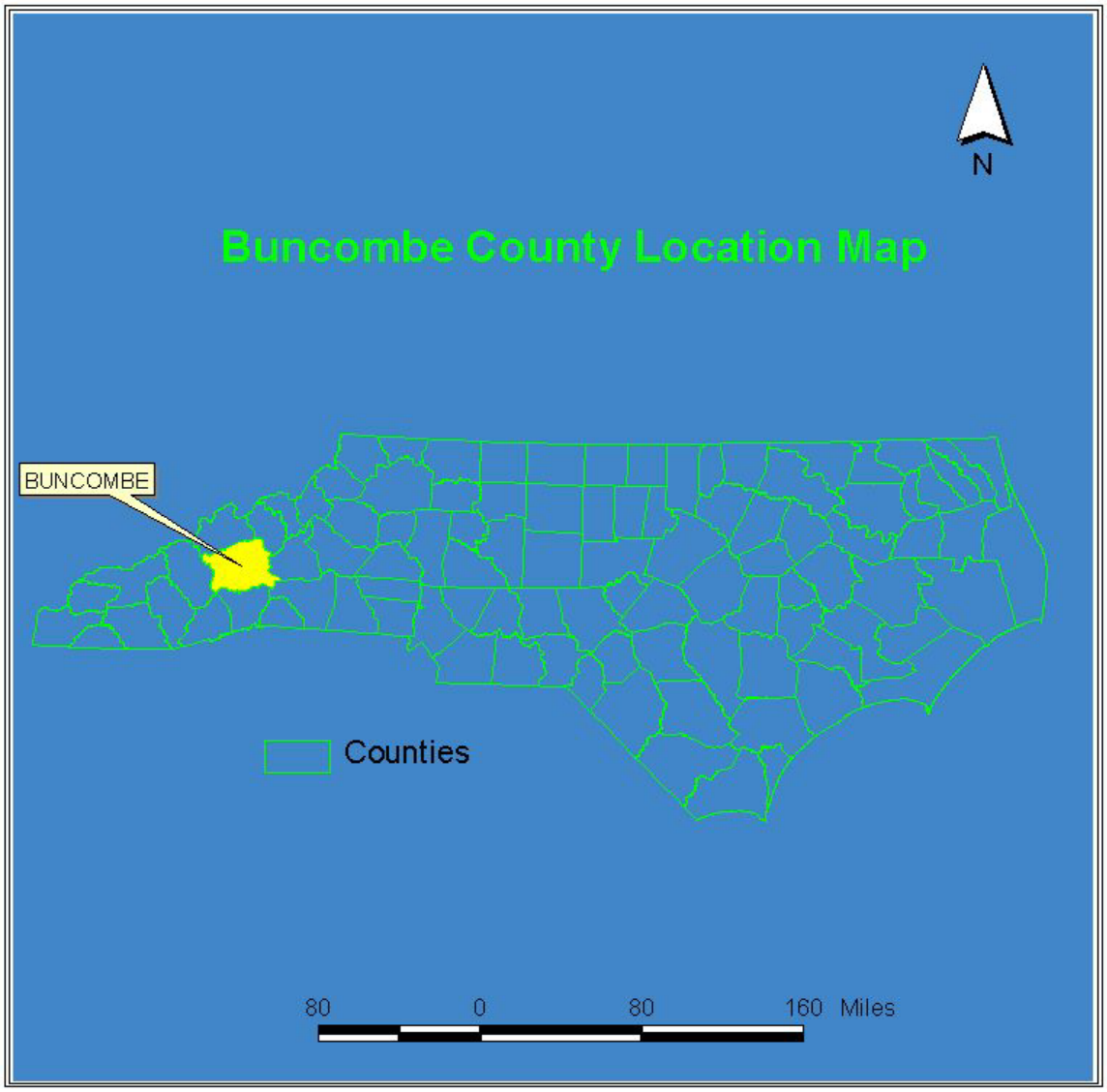
VMT: *Vehicle Miles Traveled*

Chapter 1 – THE ASHEVILLE AREA METROPOLITAN PLANNING ORGANIZATION (AAMPO)

1.1 HISTORY

The Asheville Area Metropolitan Planning Organization (AAMPO) has been in existence since the early sixties. In 1972, prompted by Section 134, Title 23 of the United States Code, a Memorandum of Understanding was executed between the Jurisdictions within Buncombe County that formed the Transportation Planning Area to provide "…A continuing, comprehensive transportation planning process carried on cooperatively (3-C) by States and local communities."

Figure 2: Buncombe County Location Map



The Memorandum of Understanding (MOU) provided for the formation of a Transportation Advisory Committee (TAC) as the policy making body for the AAMPO. The TAC is comprised of local elected officials. The MOU also formed a Technical Coordinating Committee (TCC), a group of agencies' staff members who provide and perform analysis of transportation issues.

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 identified multi-modalism as the way to address transportation needs in the United States, minimizing highway construction and single occupancy vehicle usage, while expanding travel choices and funding to alternate modes, in an effort to curb traffic congestion and air pollution, and to increase mobility.

In 1999, ISTEA was reauthorized by the Federal Government as the Transportation Equity Act for the 21st Century (TEA-21). TEA 21 continues the groundbreaking approaches set in 1991, by emphasizing local needs through stronger MPOs and public involvement, and by requiring more diverse, fiscally responsible multi-modal plans.

1.2 DESCRIPTION OF THE AAMPO AREA

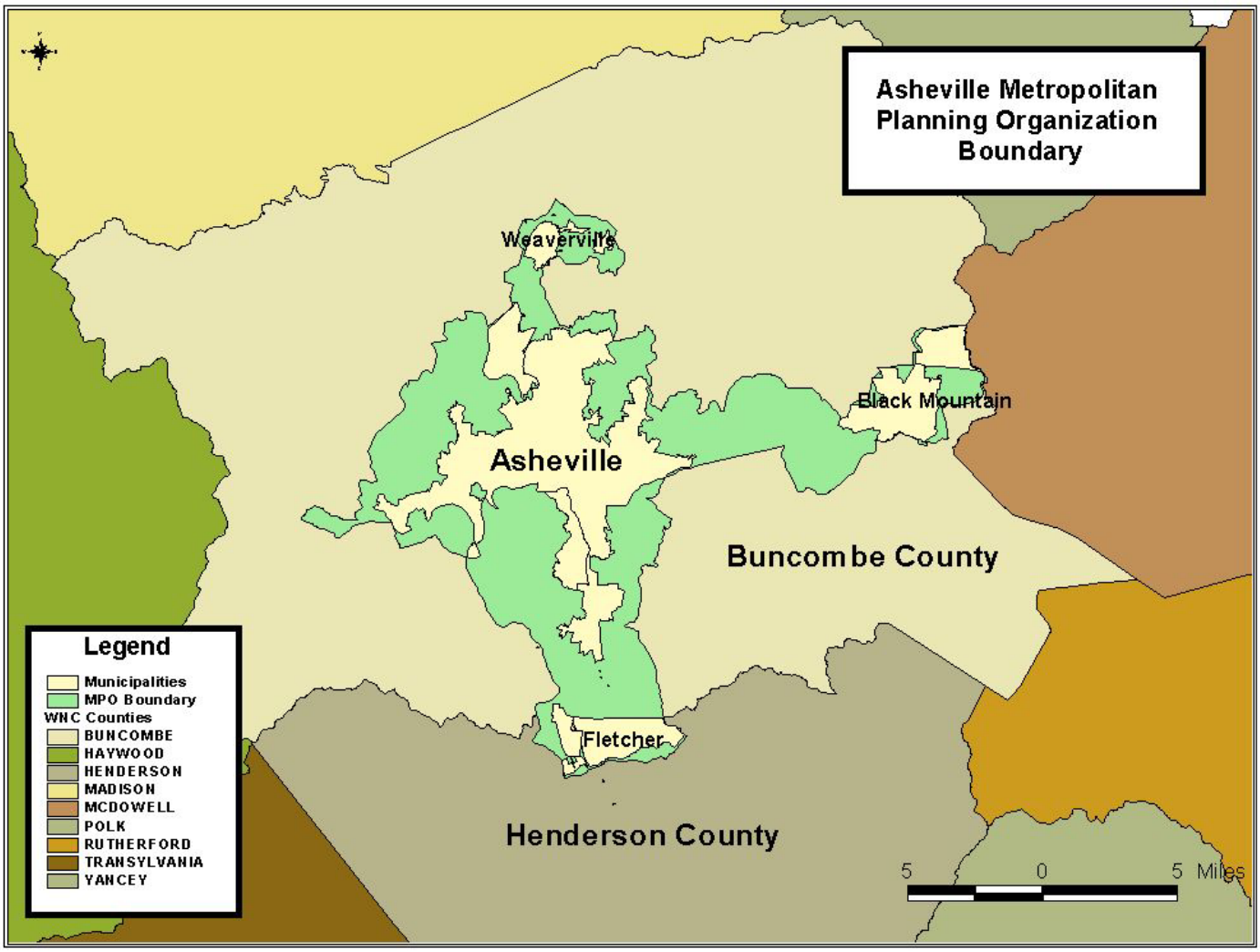
The City of Asheville, the towns of Woodfin, Fletcher, Weaverville, Black Mountain, Biltmore Forest, and Montreat, and parts of Buncombe County form the AAMPO area. It is located in Western North Carolina, nestled between the Blue Ridge and Great Smoky Mountains. Asheville is the largest city in Western North Carolina and has become the regional center for manufacturing, transportation, health care, banking, professional services and shopping. At 2,200 feet in elevation, Asheville is located on a plateau divided by the French Broad River. It is surrounded by lush mountains; many with elevations above 5,000 feet. Asheville is the county seat of Buncombe. The study area covers approximately 190 square miles. Asheville is known for its mild year-round climate, with moderate winters and summer temperatures tempered by the surrounding mountains.

History and recreation abound in the study area, with approximately 16 percent of the region's area designated as public or recreational areas. The Biltmore Estate, George Vanderbilt's 19th Century Mansion and estate comprises over 8,000 acres. The Blue Ridge Parkway is headquartered in Asheville and meanders through the study area. The study area is bordered by the Pisgah National Forest in several locations.

Recreational sites in the region include state and local parks, golf courses, and the French Broad and Swannanoa Rivers. There are various locations along the French Broad River that serve as recreational sites for canoeing, white water rafting and fishing.

The Asheville Metropolitan Area is also home to several outstanding higher education facilities including the University of North Carolina at Asheville, Warren Wilson College and Asheville Buncombe Technical College.

Figure 3: AAMPO Planning Area



1.3 THE MPO STRUCTURE

AAMPO has a three-tiered structure consisting of the Technical Advisory Committee (TAC), a Technical Coordinating Committee (TCC), and citizen advisory groups. The Technical Advisory Committee serves as the decision-making body. The TAC and TCC meet on the third Thursday of each month, and meetings are open to the public. Public participation is encouraged through advertised public comment periods at each meeting. The City of Asheville is the lead-planning agency for the AAMPO. For additional information on the location and time of the meetings or for other AAMPO information, please contact the City of Ashville Transportation Services Division at (828) 259-5943.

The Memorandum of Understanding provided for the formation of a Transportation Advisory Committee (TAC), whose membership consists of elected officials, and a Technical Coordinating Committee (TCC), which is comprises agencies' staff members who provide and perform analysis of transportation issues.

In accordance with the MPO Bylaws, the Technical Advisory Committee is comprised of two elected officials from the City of Asheville, one elected official from each of the other municipalities, and one from Buncombe County. The State Transportation Board Member for Division 13 also serves as a voting member. A Federal Highway Administration staff person serves as a non-voting member of the TAC. The Technical Coordinating Committee is responsible for facilitating the technical portions of the 3-C (continuing, comprehensive & cooperative) process and uses its technical expertise to develop recommendations to assist the Technical Advisory Committee in the transportation planning decision-making process for the AAMPO Study Area. The Technical Coordinating Committee consists of staff from all the participating local governments as well as representatives from regional, state and federal transportation agencies. Representatives from the Federal Highway Administration serve as non-voting members on the Technical Coordinating Committee.

Three formal citizen groups serve as the primary public outreach mechanism for the AAMPO. These groups include the Citizens Transportation Advisory Group (C-TAG), the Pedestrian Task Force (PTF) and the Bikeways Task Force (BTF). Membership is composed of citizens representing all seven AAMPO jurisdictions and at-large members representing various groups and/or organizations with an interest in transportation. The purpose of the citizen groups is to provide comments, advice and recommendations to both the TAC and TCC regarding transportation-planning issues.

Chapter 2 – PLANNING ASSUMPTIONS

2.1 INTRODUCTION

The Asheville Transportation Planning Area includes the City of Asheville, the Towns of Black Mountain, Montreat, Fletcher, Biltmore Forest, Weaverville, Woodfin and a portion of the urbanized area of Buncombe County. According to the Office of State Planning and the 1990 Census of Population and Housing Data, the total population of Buncombe County was 174,821 persons. The estimated population for 2000 was 206,330, an increase of 31,509 or 15.3%. This population increase places a strain on the existing transportation facilities. The LRTP is an improvement plan to accommodate the transportation needs of residents, in addition to providing greater efficiency in goods movement throughout the region.

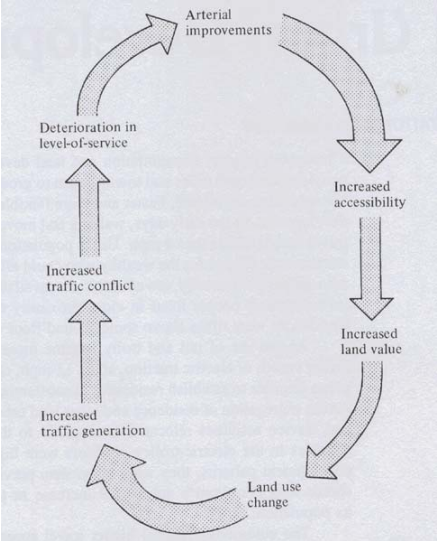
2.2 TRANSPORTATION CONNECTION TO LAND USE

There is a significant relationship between land use and transportation. The location of existing and future development has a strong influence on the transportation system in terms of highway capacity, traffic flow, traffic distribution, transit use, and pedestrian facilities. Because of this relationship, the future land use plans provided in the local thoroughfare plans are used in the process of identifying and planning for improvements to the transportation system over the timeframe of the LRTP.

The automobile has provided personal mobility to Americans that was unimaginable to its early designers. It has also had a profound effect on the economy, as well as the land use patterns, of the AAMPO area. Today, however, this sprawling land use pattern contributes to traffic congestion and air pollution. Experiences of other metropolitan areas demonstrate that the construction of wider roads is not the solution to the problem. In fact, it actually contributes to traffic congestion.

The process is known as The Transportation-Land Use Cycle[1]. The widening of a road, in an effort to alleviate traffic congestion, could increase congestion in the long run. For example, a new road is constructed that modifies the accessibility of an area. This, in turn, makes the land more valuable and commercial development occurs. The new development is a destination and traffic volumes increase on the new road. In most cases, the new development will be of the strip-development type with many, closely spaced access driveways. The numerous access points exacerbate the problem with vehicle turning movements into and out of the commercial development. The result is reduced speeds, traffic delays, accidents, motorist anxiety, and a lower level of service. The cycle is completed when the increased traffic demand necessitates further roadway improvements, which is very costly in terms of right-of-way acquisition. The cycle can be broken if travel demand patterns are altered (land use policy) or capital investments in transportation are allocated in a different manner. The Transportation-Land Use Cycle is illustrated below.

Figure 1: The Transportation-Land Use Cycle



The City of Asheville Planning Department is in the process of updating the City's comprehensive plan, Asheville City Plan 2010. The new comprehensive plan will be called Asheville City Plan 2025 and is expected to be complete in FY 2001-02. This updated plan will incorporate "smart growth" principles intended to promote denser development closer to the urban core, thereby minimizing the effects of sprawl and maximizing the effectiveness of the existing transportation infrastructure. Strong land use policies and regulatory programs that discourage sprawl development, targeted road building in support of those policies, and increased focus on mass transit and other multi-modal transportation improvements, represents the best opportunity for achieving an effective and efficient transportation network in the AAMPO area.

2.3 TRANSPORTATION AND AIR QUALITY

The scenic beauty and vitality of the Asheville area, and the health of area citizens is threatened by increasing air quality problems. Topographically, the Asheville area is prone to "inversion" episodes that trap pollutants within the Asheville basin. The pollutant that causes the most concern in the Asheville area is ozone. A significant contributor to this problem is the Nitrogen Oxides from power plants in the Tennessee Valley Authority, and other sources outside the region. Although outside sources contribute an estimated 80% of the pollutants, local sources, including mobile sources such as autos and trucks, are still a significant factor in local ozone pollution problems. This fact underscores the need to have a balanced, multi-modal approach to transportation planning. Strategies must be devised to address mobile source pollutants by reducing vehicle miles traveled, increasing vehicle occupancy, and promoting bicycling, walking, and transit use as convenient alternatives to the automobile. Alternative transportation modes can be especially effective in reducing the most polluting short vehicle trips. In addition, transportation planning and land use planning must be coordinated to reduce dependence on the automobile.

2.4 SOCIO-ECONOMIC DATA

The 2000 census reported a county population of 206,330. The growth within the past thirty years has been significant, as national trends during that time shifted to a single occupancy vehicle lifestyle. This trend has increased sprawl and reduced the effectiveness of the highway system. The following table illustrates Buncombe County and the AAMPO communities. Population as reported in the last three census counts, provides projections for the planning year of 2025:

Table 1: AAMPO and Buncombe County Population Projections[2]

	Surveyed Population			Projected Population		Annual Percent Growth	
Place	**1980**	**1990**	**2000**	**2010**	**2025**	**1990-2000**	**2000-2025**
Buncombe County	160,934	174,821	206,330	236,461	281,778	1.67%	1.26%
Asheville	59,985	61,885	68,889	76,701	90,112	1.08%	1.08%
Biltmore Forest	1,499	1,327	1,440	1,550	1,800	0.82%	0.90%
Black Mountain*	4,083	5,418	7,511	11,134	19,146	3.32%	3.81%
Fletcher	N/A	2,787	4,185	6,284	10,000	4.15%	3.55%
Montreat*	741	692	630	697	812	-0.95%	1.02%
Weaverville	1,495	2,107	2,416	2,705	5,000	1.38%	2.95%
Woodfin*	N/A	2,736	3,162	3,654	6,500	1.46%	2.92%

Table 2: AAMPO Employment Projections[3]

		Employees	
	Classification	**2000**	**2025**
X1	**Industrial (SIC Code 1-49)**	**25,188**	**26,857**
X2	**Wholesale/Retail (SIC Code 50-54, 56-57, 59)**	**18,018**	**30,013**
X3	**Highway/Retail (SIC Code 55, 58)**	**8,940**	**21,532**
X4	**Office/Industrial (SIC Code 60-67, 91-97)**	**7,478**	**12,443**
X5	**Service (SIC Code 70-76, 78-89, 99)**	**39,117**	**79,573**

2.5 OTHER LAND USE AND TRANSPORTATION PLANS WITHIN THE AAMPO

- Asheville City Plan 2010
- Asheville Greenway Master Plan
- Buncombe County Land Use Study
- Phase I Environmental Analysis – Asheville Urban Area
- The Riverfront Plan
- The Asheville Regional Airport Master Plan
- City of Asheville Pedestrian Thoroughfare Plan
- AAMPO Pedestrian and Bicycle Thoroughfare Plan
- Land-of-Sky Regional Council Transportation Options for Western North Carolina
- Town of Woodfin Land Use Plan Analysis and Land Development Plan
- Town of Woodfin US 25 Corridor Study
- Town of Fletcher US 25 Corridor Study
- Town of Fletcher Greenway Master Plan
- Town of Black Mountain and Montreat Thoroughfare Plan
- Town of Weaverville Pedestrian Plan

To view these documents contact the Transportation Services Division of the Engineering Department of the City of Asheville at (828) 259-5943.

Chapter 3 – LONG RANGE TRANSPORTATION PLAN

3.1 INTRODUCTION

Since 1972, the Asheville Area Metropolitan Planning Organization (AAMPO) has conducted a continuing, comprehensive, and cooperative (3-C) transportation planning process for the greater Asheville area. This fiscally constrained Long Range Transportation Plan (LRTP), which provides a picture of those transportation improvements that are planned to occur by the year 2025, is an example of that 3-C process. This plan discusses the transportation planning process, and provides supporting data behind the plan's development.

AAMPO has the responsibility to ensure that the 3-C transportation planning process is appropriately conducted and to make decisions related to the planning and funding of transportation projects which are proposed to be constructed using federal funds. For a project to be eligible to receive federal transportation funds it must be included in this fiscally constrained long-range plan. The fiscal constraints are determined by projected funding levels at selected planning horizons (see Chapter 4).

This AAMPO 2025 Long Range Transportation Plan (LRTP) is an update of the Thoroughfare Plan, which was adopted by the AAMPO Technical Advisory Committee in 1991. If the Asheville Area becomes non-attainment for air quality, this plan must be updated on a three-year cycle.

The purpose of the AAMPO 2025 LRTP is to identify and detail the multi-modal transportation improvements and programs to be carried out within the Metropolitan Planning Organization's (MPO) study area during the plan's timeframe and demonstrate the financial means by which these improvements and programs will be implemented. Prior to the Plan's adoption and during its development, public participation sessions were held to obtain input on the document, as well as the type of projects that should be included in the Plan. The public participation was obtained through public comment during regular meetings of two AAMPO Committees – the Technical Advisory Committee and the Technical Coordinating Committee. Additionally, a series of seven separate public visioning meetings were held at various locations throughout the MPO area.

This plan addresses transportation needs, environmental protection and quality of life issues in the Asheville Metropolitan Area. The Asheville Area Metropolitan Planning Organization (AAMPO), in order to meet the needs of its citizens and in response to federal requirements, has compiled all of the elements that guide transportation planning in this area into a comprehensive, long-range, multi-modal transportation plan.

3.2 ROADWAY ELEMENT

3.2.1 Thoroughfare Plan

The roadway element has been the backbone of the transportation plan, and has existed since the development of the first Asheville Thoroughfare Plan in the early 1960's. The thoroughfare planning process was mandated by the NC General Assembly in 1959 (G.S. 136-66.2). It requires that each municipality and the North Carolina Department of Transportation work cooperatively to develop a comprehensive street system plan that will serve present and anticipated volumes of vehicular traffic in and around the municipality. Subsequent studies resulted in Thoroughfare Plan updates being mutually adopted in 1968, 1978 and 1991, with minor revisions occurring on an as needed basis.

Under North Carolina State law, the Thoroughfare Plan Map is mutually adopted by the affected municipalities and the North Carolina Department of Transportation. The financially constrained portion of the Thoroughfare Plan serves as a portion of the Highway Element of the Long-Range Transportation Plan (LRTP). The LRTP is approved by the Asheville MPO as required by Federal regulations. The current Thoroughfare Plan was mutually adopted by the local governments and NCDOT. The Thoroughfare Plan initially had a base year of 1990 and a design year of 2010, and was not fiscally constrained. AAMPO has determined that the Thoroughfare Plan remains a valid basis for the fiscally constrained 2025 Transportation Plan.

Based on a review of the thoroughfare plan, a list of priority projects was developed and approved by the AAMPO TCC and TAC. The list addresses the area needs for the next 20 plus years. Proposed transportation projects were categorized into four groups:

1. Priority ONE for projects currently included in the FY 2002-2008 Metropolitan Transportation Improvement Program, MTIP, (and therefore also in the 2002 –2008 State Transportation Improvement Program, STIP.)
2. Priority TWO for projects to be funded within the 2015 horizon.
3. Priority THREE, for projects that, based on population and economic projections and land use, are located in critical areas of expansion and would need to be constructed and/or improved, but are not currently included in the MTIP and are fiscally constrained within the 2015 to 2025 time frame.
4. Priority FOUR, for other projects included in the Thoroughfare Plan or other adopted MPO plans that are unfunded.

The Priority Needs List as developed by the MPO was a critical element in determining priority two and three and four projects, which are fiscally constrained. The detailed list of projects with their associated costs is included in Chapter 4 of this document.

3.2.2 Existing Transportation System

The region's roadway network consists of a system of routes that radiate from the City of Asheville. These routes are comprised mainly of facilities within the interstate and primary highway systems. Interstate 26, US 25 and US 19/23 (Weaverville Highway) are the major

north-south corridors. The major east-west corridors are Interstate 40, Interstate 240, US 70 (Tunnel Road), US 74A (Charlotte Highway) and US 19/23 (Smokey Park Highway).

These facilities are burdened with carrying the majority of the traffic in the region as each of the routes provides either direct or indirect connections between the interstate system and the residential and commercial sectors of the region.

There are a number of facilities in the secondary highway system that serve to provide access to additional parts of the region and alleviate some of the burden on the primary routes. These facilities include US 25A (Sweeten Creek Road), NC 191 (Brevard Road), NC 63 (Leicester Highway), NC 251 (Broadway Street and Riverside Drive), NC 146 (Long Shoals Road) NC 112 (Sardis Road and Sand Hill Road), (and NC 81 (Swannanoa River Road). In addition, the Blue Ridge Parkway, a road within the National Park System, bisects the region and serving transportation purposes, especially between US 70 and NC 191.

3.2.3 Geographical Constraints

Because of the area's unique geography, there are several natural and man-made constraints to travel and the construction of roadways on new corridors.

The French Broad River flows south to north, dividing the region in two. With a limited number and location of river crossings, road users must travel on east-west corridors in order to reach the major north-south corridors for inter-regional travel. This is particularly a problem near the center of the City of Asheville, where many east-west and north-south routes converge.

There are also a number of mountain ridges that impede travel through the area. Primarily these limit east-west travel in the region.

The Biltmore Estate with its 8,000 acres of private land limits the ability to construct new roadways and widen existing roadways.

3.2.4 Roadway Design Guidelines

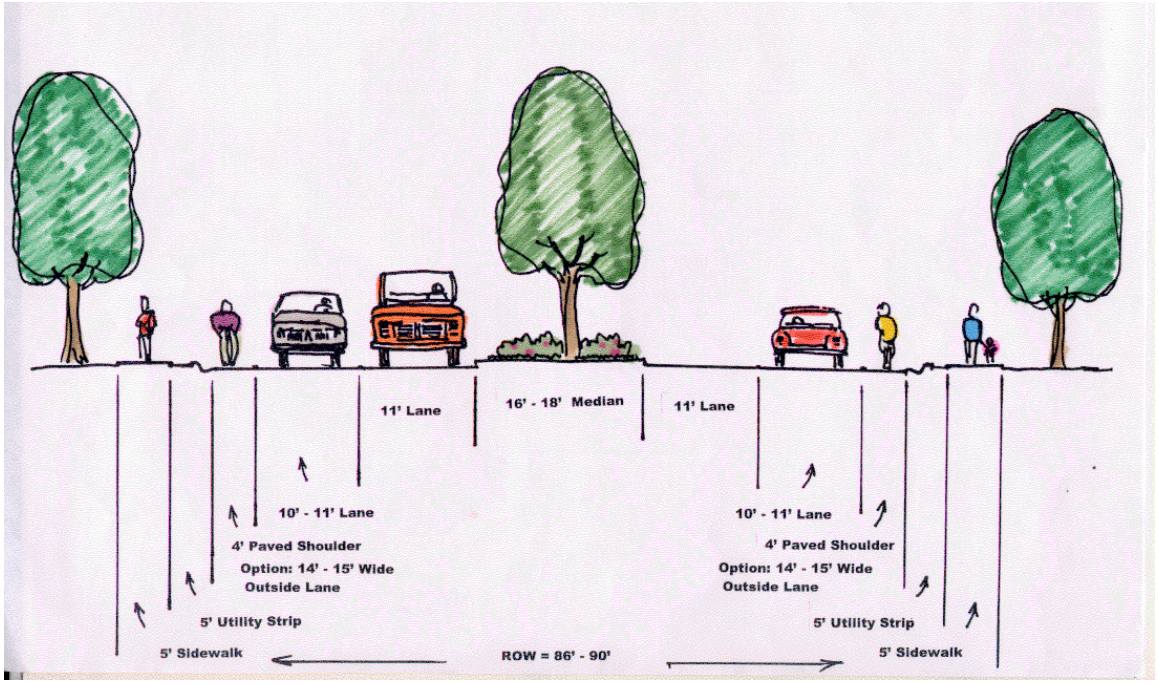
Multi-Lane Facilities
AAMPO has a strong preference for roads with a divided landscape median over a facility with a center turn lane. AAMPO's adopted design guidelines specify that 4-lane roads with a divided landscape median should be considered as the prevailing cross section on proposed widenings. Some of the AAMPO's design concerns with five-lane, undivided facilities are as follows:

- *Five-lane facilities have higher crash rates than divided facilities.* [4]
- *Five-lane facilities make it difficult to manage access and coordinate land use and transportation planning.*[5]
- *Five-lane facilities are particularly detrimental to pedestrian safety and convenience.*[6]
- *Five-lane facilities are usually less safe for bicyclists than divided facilities.*[7]

- *From an aesthetic standpoint, five-lane facilities are less than desirable as entryways into and corridors through our communities.*[8]

The AAMPO acknowledges that the divided cross section has a few drawbacks, including a possible need for additional right-of-way and requiring u-turns to accommodate existing driveways. These drawbacks, however, do not negate the strong desire on the part of the AAMPO to see the divided facilities implemented.

Figure 4: Typical Cross Section of AAMPO's Preferred Multi-Lane Facility



The AAMPO has also adopted preferred designs for two-lane and three-lane facilities. On existing four lanes, undivided sections, three-lane facilities should be considered as a possible design for improving these roadways.

Figure 5: Typical Cross Section of AAMPO's Preferred Three-Lane Facility

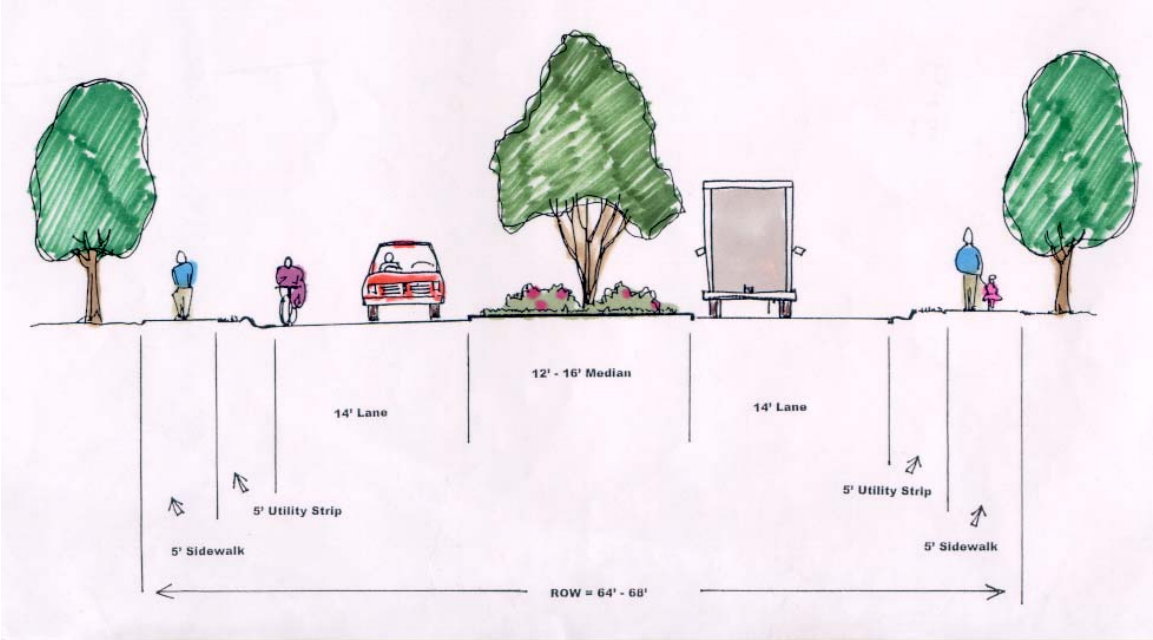


Figure 6: Typical Cross Section of AAMPO's Preferred Two-Lane Urban Facility

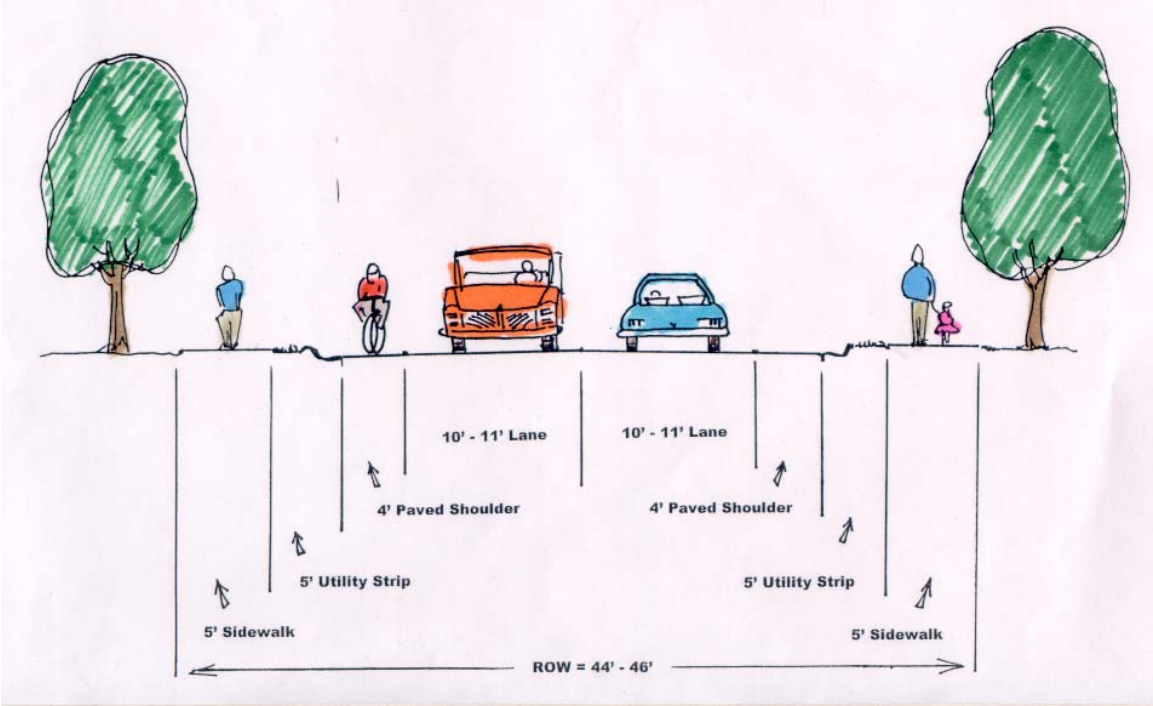
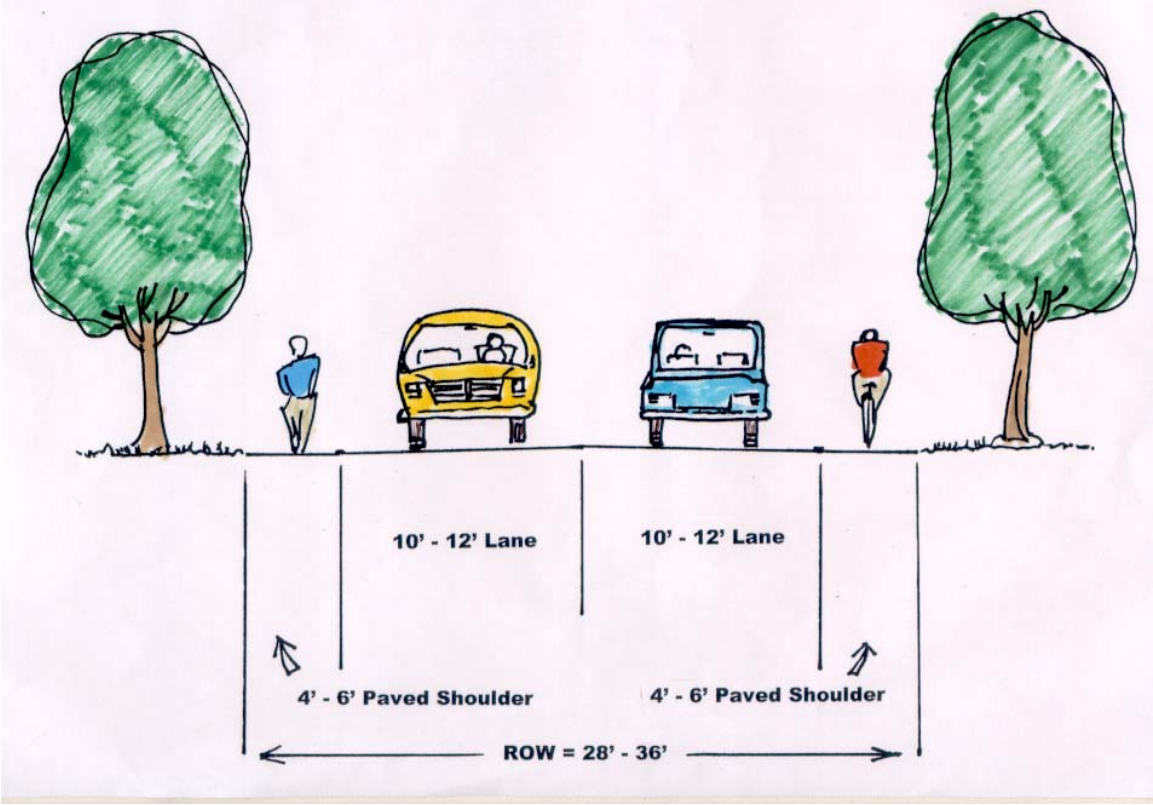


Figure 7: Typical Cross Section of AAMPO's Preferred Two-Lane Rural Facility



3.3 PEDESTRIAN AND BICYCLE ELEMENT

3.3.1 Vision

"The Asheville Urban Area will have a network of bicycle and pedestrian routes which are safe and provide reasonable transportation options for its citizens. Individual jurisdictions within the MPO and the MPO itself will provide leadership in the promotion, education, law enforcement, and facilities development that supports this network."[9]

3.3.2 Pedestrian and Bicycle Planning

Transportation is the process of moving people and goods. Everyone at some time has a need to get from one place to another, and yet some do not have access to automobiles and some prefer riding a bicycle or walking. Before the dominance of automobiles, towns were commonly designed around pedestrian activity, and usually accommodated bicyclists as a matter of course. Compact, mixed-use, and high-density centers, surrounded by farmland or forest, were a typical development pattern of many towns in the Asheville area. Because of mountainous terrain, rapid growth occurred along corridors defined by the French Broad River and its tributaries. Asheville area jurisdictions therefore must improve and maintain existing pedestrian and cycling friendly areas, while retro-fitting needed amenities along urban growth corridors which are limited in space and designed primarily for automobiles.

Table 3: NC and AAMPO Statistics

- Between 1985 and 1994, NC population grew by 14.5% while vehicle miles traveled (VMT) increased by 44%.[10]
- Over 100,000 acres were developed each year between 1992 and 1997 in NC, ranking NC sixth among all states in the number of acres developed. And the pace of development has been speeding up in recent years.[11]
- The AAMPO is spreading out much faster than it's growing in population, consuming more land per person – between 1950 and 1990, Asheville's urbanized area grew almost 5 times faster than its population.[12]
- One-fourth of all trips people in the U.S. make are one mile or less, but three-fourths of these trips are made by car. More than half of all trips are 3 miles or less.[13]
- Only 19% of NC residents are getting the recommended amount of physical activity (30 minutes, most days of the week, recommended by the US Surgeon General). Almost one-third of North Carolinians skip physical activity all together.[14]

3.3.3 Current Efforts

Current efforts that encourage bicycle and pedestrian transportation are as follows:

- *AAMPO Pedestrian and Bicycle Thoroughfare Plan* adopted in 1999, serves as a guide to the TAC, local communities & jurisdictions, and the NCDOT, with goals and objectives for improving the quality and safety of bicycle and pedestrian transportation within the AAMPO area.
- *City of Asheville's Pedestrian Thoroughfare Plan* adopted in 1999, the Plan serves as the basis for pedestrian planning and prioritizing capital improvement and maintenance projects in Asheville. The City of Asheville is within the implementation phase of this plan.
- *The Woodfin Land-Use Plan* designates green space and greenways that could potentially serve pedestrian and bicycles. The Town is also hoping to develop a rail-trail, which would connect the Riverside Drive Corridor with US 25 and provide a critical link for bicycle and pedestrian transportation. Additionally, the town is looking at a streetscape plan for the business district along US 25.
- *The Town of Black Mountain "Sports Loop " Plan* provides sidewalks and walking trails plan to link schools, recreation centers, and parks for pedestrians and cyclists. This plan received $80,000 in funding from NCDOT Demonstration Project Funds for a portion of the loop.
- *The Town of Weaverville Pedestrian Plan* was developed in 1994 through a public process and has budgeted a schedule for sidewalk development and improvements at $10,000 per year.
- *The Town of Fletcher's Corridor Plan and Revised Zoning Ordinances* will provide sidewalks along both sides of route 25 through the Town. Additionally, the Town has recently completed a Visioning and Strategic Planning Process, which include initiatives to develop greenways and create a more walkable downtown.
- *The Town of Fletcher's Greenway Plan* is a plan for future greenways facilities in the Town of Fletcher.

- *Asheville's Unified Development Ordinance (UDO)* has provisions requiring sidewalks for all new non-residential developments and some residential developments. The UDO also requires that bicycle parking be provided at a rate of 5% of the planned vehicular parking spaces. Additionally, Asheville has an adopted Pedestrian Thoroughfare Plan, which is in the implementation phase.
- *Asheville's Greenways Master Plan* This plan should be referenced for projects within the municipal boundaries of Asheville as it relates to pedestrian and bicycle transportation. "The Vision for the Asheville Greenways System is a network of land and water corridors in Asheville, with greenways serving to protect and promote the qualities of these corridors, places where land connects to work, school and shops; and city connects to countryside."

3.3.4 Pedestrian and Bicycle Element Goals

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) required each state to incorporate a long-term bicycle and pedestrian plan into its long-range transportation plan.

Detailed goals have been outlined within the Adopted MPO Pedestrian and Bicycle Thoroughfare Plan. The goals can be categorized into four broad goals, the "four E's, engineering, education, encouragement, and enforcement:

- *Engineering:* Develop facilities and infrastructure
- *Education:* Provide public education within the school system and for the public-at-large
- *Enforcement:* Increase law enforcement by working with the local municipal police forces
- *Encouragement:* Promote bicycling and walking through festivals and media outreach

3.3.5 Funding

The mountainous terrain and abundance of streams and waterways in the Asheville MPO Area can cause costs for paths and on-road facilities to be higher than in other areas of the state. Additionally, lack of suppliers of asphalt and other materials also raise costs in our area.

Major funding sources are listed below:

- *Local Sidewalk Enhancement Dollars*. Each NCDOT Division is allocated $100,000 for sidewalk enhancement projects. This money is for the entire Division 13 and is typically allocated to smaller towns.
- *Small Urban Funds* are granted up to $150,000 for projects located within a city or within a mile of city limits. Annually, $1,000,000 is allocated in Small Urban Funds for Division 13.
- *Spot Safety and Maintenance Funding*. Annually the NCDOT makes safety improvements to roadways located within the MPO Area. The Division Engineer will determine whether or not the request is viable and eligible for regular maintenance dollars, and may request usage of "spot safety funds "from NCDOT in Raleigh. Requests typically deal with the installation of guardrails, intersection improvements, or other safety items.

- *Transportation Enhancements Program (TEA-21).* 10% of North Carolina 's Surface Transportation Program (STP) funds are available for "Enhancements". Enhancements can include trails, greenways, sidewalks, signage, bicycle facilities, and safety education. There is a 20%match of local funds required and localities must have right-of-way for projects to be eligible.
- *PL-104 Planning Funds.* Annually the MPO receives funds for planning activities in the Asheville Urban Area. These funds can only be used for the long range planning and not for construction and maintenance.
- *MPO Planning and the Transportation Improvement Program (TIP)* The Asheville Area Metropolitan Planning Organization incorporates requests from local governments into a single needs list for the MPO Area.
- *Local Municipal Funding:* Local funding is dependent on jurisdictional budgets and priorities. For additional information, please refer to the *AAMPO Pedestrian and Bicycle Thoroughfare Plan*

3.3.6 Bicycle Facility Guidelines

The Bikeways Task Force (BTF) has continually provided input and recommendations to the TAC and NCDOT on projects regarding bicycle accommodations. The AASHTO's Guide For the Development of Bicycle Facilities is the backbone for NCDOT's Bicycle Facilities Planning and Design Guidelines and BTF's recommendations. Within the AAMPO area, NCDOT has primarily supplied "Share the Road" signage and wide 14' outside lanes on selected projects. The BTF has expressed a desire for NCDOT to install a variety of bicycle facilities to accommodate a variety of transportation users. Some minimum guidelines set forth by ASSHTO and NCDOT call for:

- *Bicycle Lane* with Curb and Gutter
  Five feet from face of curb in both directions
- *Bicycle Lane* without Curb and Gutter
  Four feet from edge of pavement in both directions
- *Shared Use Path* (refer to 3.3.8)
  Minimum path width of ten feet
- *Shared Roadway with wide curb lanes*
  Minimum curb lane width of fourteen feet in both directions

Refer to AASHTO's Guide For the Development of Bicycle Facilities and NCDOT's Bicycle Facilities Planning and Design Guidelines for more detailed information.

3.3.7 Pedestrian Facility Guidelines

The City of Asheville pedestrian guidelines specify that a 5' wide sidewalk with 5' of separation, grass or planted area, between the sidewalk and the roadway be constructed on all requested TIP projects. The AAMPO acknowledges that the local agencies are responsible for paying a percentage of the cost of installing the sidewalk per NCDOT's October 1, 2000 Pedestrian Policy Guidelines. A minimum of 5' of separation and a 5' sidewalk is consistent with NCDOT's Pedestrian Policy Guidelines of providing a standard 10' berm. It is also

important to note that at this time, local governments are required to maintain sidewalk facilities.

3.3.8 Shared Use Path Guidelines

Shared use paths are most often constructed in independent rights-of-way. Occasionally, it may be appropriate to construct a shared use path adjacent to an existing roadway, but care must be used when developing these facilities. Generally, these types of facilities would be included as stand-alone projects within the TIP, however there could be shared use facilities included within other TIP projects. Currently, connectivity of shared use paths is compromised, thus limiting the potential increase of bicycling and pedestrian modes of transportation. NCDOT Bicycle Facilities Planning and Design Guidelines and AASHTO Guide For the Development of Bicycle Facilities requirements should be followed in the design and construction of shared use paths. The Asheville Greenway Master Plan should be referred to for potential shared use path corridor locations within Asheville's municipal boundaries.

3.4 PUBLIC TRANSPORTATION ELEMENT

3.4.1 History

The Asheville Transit Authority was formed by the City of Asheville in 1968. The Asheville Transit Authority hired a management company to employ drivers and manage operations of the bus system.

In 1999 The City of Asheville disbanded the Transit Authority and reconstituted it as an advisory commission, moving the transit system into the city structure as a department of the City (Transit Services Department).

In June 2000 the City imposed a Vehicle Registration Fee of $5.00 to provide the transit system with money for capital projects and additional operating expenditures. At that time the Transit Services Department embarked on a two-tiered (operational and capital) multi-year program of modernizing the system and reorganizing service delivery.

3.4.2 Legislative Requirements

The major legislative element not already in effect that will influence transit through the next ten years is a requirement that, beginning in FY 2004, 50% of all bus purchases in which there is state participation will be required to be alternate fuel vehicles.

The Asheville Transit System has budgeted, in its mid range financial plans, for the conversion of its entire fleet to alternative fuels meeting or exceeding the emission standards of Natural Gas. The expansion of public transportation in Buncombe County would actually be a benefit in assisting the area in its efforts to reduce air pollution and regain its clean air status.

Further, the mix of vehicles in the fleet is migrating towards smaller vehicles, using less fuel, and running with a greater capacity to use ratio.

Table 4: Asheville System Operations Facts

- Asheville Transit System operates 16 Orion 29 passenger buses;
- Each bus costs around $225,000;
- Each bus is 30 feet long;
- All buses are powered by Detroit Diesel Series 5 diesel engines;
- The buses use K-2 Kerosene for fuel - it burns cleaner, reduces engine wear, and does not smoke;
- These buses were purchased in 1996;
- The buses have a twelve year life span;
- The Asheville Transit System has approximately 700 designated bus stops on its routes;
- The Asheville Transit System has placed 10 bus shelters around the community;
- The Asheville Transit System has placed approximately 50 benches around the community;
- The Asheville Transit System has 40 employees, of the 40 employees, 27 are drivers;
- The Asheville Transit System carried 953,139 Passenger Trips during FY 1999-2000;
- The Asheville Transit system drove 583,649 Revenue Miles in FY 1999-2000;
- The Total Income for FY 1999-2000 was $2,416,691 (Excluding School Buses)
- The cost of operations for FY 1999-2000 was $2,252,627 (Excluding School Buses);
- Fare Box revenue for FY 1999-2000 was $500,499.
- All of the buses are equipped with racks for storage of bicycles, making the system attractive to more riders, and providing additional transportation choices.

Asheville Transit System operates on a "Pulse System". This means that most buses arrive and depart near the hour or half hour. This minimizes waiting times at the Transit Center for the public.

3.4.3 Services Provided

Para Transit – The Asheville Transit System has declared the entire City of Asheville as an ADA service area. The Asheville Transit System also provides paratransit services within three quarters of a mile of any route outside the city, or where the route is less than three quarters of a mile from the city limits. Para transit for the Asheville Transit System is provided through Mountain Mobility, a Buncombe County transportation agency.

Public Mass Transit – The primary mission of the Asheville Transit System is to provide public mass transit to all customers. This includes daily service, Saturday service, and some evening service on Friday and Saturdays while UNCA is in session.

3.4.4 Objectives

Short-Range Objectives (1 to 5 years):

- Expansion of service frequency;
- The extension of service hours;
- The provision of services to the greatest possible number of households within the service area, with emphasis on those not possessing automobiles, blind and other partially impaired people, the elderly, tourists, environmentally conscious people, and other markets as they may manifest themselves through time;
- Creation of multi lingual information to attract non-English speaking people to transit;
- Coordination with County Mountain Mobility services to effect the greatest range of seamless travel possible;
- The institution of more flexible service delivery;
- Expand inter-city service to Hendersonville, Black Mountain, Weaverville, Mars Hill, Sylva, and other points west;
- Upgrade and expand amenities at the transit center and bus stops, including system maps, information systems, benches, shelters, a waiting room, and pedestrian and bicycle accommodations and facilities;
- Serve the train station when passenger rail operations begin in Asheville;
- Increase funding from state and federal sources;
- Transform fleet to environmentally sensitive equipment;
- Stagger equipment purchases to spread out the financial impact of new buses;
- Create a Vehicle Replacement Fund from local revenue sources for the acquisition of new equipment;
- Increase ridership amongst those currently using an automobile for city trips;
- Increase community presence through marketing.
- Locate and implement informal park and ride areas.

Mid Range Objectives (5 to 10 years):

- Institute both formal and informal Park & Ride facilities;
- Reconfigure Transit Center to accommodate intercity buses and provide passenger services;
- Use transit service provision to reinforce growth policies (urban form) of City of Asheville;
- Expand access to outlying recreational facilities in the Asheville area;
- Involve other local transportation resources in expanding access to transportation services;
- Continue to upgrade and expand pedestrian and bicycle facilities and services consequential to the use of the Asheville Transit System.

Long Range Objectives (10 to 20 years):

- Provide necessary services to transit users without inconvenience or delays in travel
- Implementation of an HOV lane from downtown Asheville to Hendersonville, Black Mountain, and Weaverville
- Continue to upgrade and expand pedestrian and bicycle facilities consequential to the use of the transit system.

3.4.5 Human Services Transportation System

The MPO area has at least two forms of Human Services Transportation Systems. Human Services Transportation Systems include Mountain Mobility and Call-A-Ride. Please refer to the Land-of-Sky Regional Council's Transportation Options for the Western North Carolina for additional information. This document may be viewed at the offices of the Transportation Services Division. Please contact (828) 259-5943.

3.5 RAIL ELEMENT

3.5.1 Rail Element Recommendations

Railroads serve regional and national transportation functions and are an important part of Buncombe County's integrated transportation system. Currently, there is increased interest in rail as an economically efficient and environmentally sound mode for the intercity transport of goods and people, as expansion of the highway system becomes more cost prohibitive

In Asheville and Buncombe County, rail service is needed by many businesses to transport bulky, heavy or oversized shipments. Amtrak records indicate that rail passenger ridership is increasing. Planning for the future of our railroads to keep them functional and operational is in the public interest and benefits the county's industries and consumers.

Several rail related improvements have been proposed. A rail overpass has been proposed for the track on Biltmore Avenue at Biltmore Village. Due to funding restrictions, this is not currently feasible. AAMPO is interested in pursuing a historic rubber wheel trolley service which could be feasible in limited scope and tied to a major economic development project. It could serve as the first stage of a larger rail system. Lastly, AAMPO is working with the State to provide a passenger rail service to the area. Currently 3 million dollars is earmarked by the State to secure a corridor and station location.

3.5.2 Railroads Currently Serving or Proposed for the Asheville Area

The National Railroad Passenger Corporation, better known as Amtrak, was established in 1970 to relieve railroads of providing passenger service. Asheville and Buncombe County are currently not served by passenger service. The North Carolina Department of Transportation has included funding in the STIP for improvements to the rail facilities from Statesville to Asheville for the purpose of restoring passenger rail service to the western portion of the state. Rehabilitation of former depots and construction of new ones are included in this funding. It is hoped that service will be initiated in 2005.

CSX Transportation, Inc., CSX was formed in the mid 1980s by a merger between Seaboard Coast Line Industries and the Chessie System. Seaboard Coast Line Industries had previously merged the operation of Seaboard Coast Line Railway Company with that of the Louisville and Nashville Railroad Company and the Carolina, Clinchfield, and Ohio Railway Co. In North Carolina, CSX transports a wide variety of commodities over 1,178 miles of

track. Major freights are coal, pulp and paper, lumber and wood products, fuel and chemicals.

Norfolk Southern Corporation In the mid 1980s, Southern Railroad merged with the Norfolk and Western Railroad to become the Norfolk Southern Corporation. Norfolk Southern Corporation transports goods over 14,600 miles of track throughout 29 states and Canada. The corporation owns or leases 1,560 miles of track in North Carolina where major transported commodities include coal, pulp and paper, lumber and wood products, fuel and chemicals.

Table 5 :Proposed Biltmore Rail Station Service Requirements

- *Projected passengers:* Station would initially serve 75-100 persons (includes passengers and "meeters and greeters")
- *Station size:* Initial station space requirements: 2,500 square feet for rail functions (includes ticket window and office, baggage area, restrooms, waiting room) Site should provide for large tour groups. Site should have space for expansion to meet future demand
- *Service times/ frequencies*: Initial service would likely be one train in each direction, four days a week
- *Trip types*: Tourism, personal, business
- *Other uses and transportation modes:* Other modes serving station may include local and regional bus/van services, taxis, shuttles, tour buses, and Greyhound. Ancillary uses could include a visitor center, offices, and retail
- *Passenger train operations:* Train will terminate in Asheville, reverse direction at Biltmore Village and layover for return trip; storage track needed; potential for railroad passenger employee welfare facilities
- *Freight train operations*: Passenger train and station operations should minimize potential conflicts with Norfolk Southern, particularly freight yard and through freight operations
- *Platform requirements:* 600 foot tangent platform with 300 foot canopy, with room for baggage service
- *Access requirements:* Site should allow for easy and safe access and circulation of pedestrians, automobiles, shuttle buses, local and regional buses, vans and charter buses
- *Parking requirements (estimated)*: 75 spaces (including short-term, long-term and handicapped); 5-6 taxi spaces; City bus stop; Space for shuttles, charter buses (3 bays); 3 bays for Greyhound, if station is shared; and Regional van service stop
- *Access to destinations*: Where feasible, site should provide easy and safe connections to area destinations, including safe pedestrian access

3.6 AVIATION ELEMENT

The Asheville Regional Airport (AVL) is located at 2,165 feet above sea level, nine miles south of the city of Asheville, North Carolina and abutting the limits of the Town of Fletcher. Interstates 26 and 40 provide access to AVL for outbound and destination passengers from the surrounding service area comprising 11 counties, including all of the AAMPO planning area. Limited transit service is currently available to AVL.

AVL currently has one single 8,000-foot runway with a full parallel taxiway. AVL's airport classification is a C-3 airport; designed to accommodate aircraft with speeds between 121 knots and 141 knots and handle wingspans up to, but not including 118 feet. AVL encompasses 163 acres, while air carrier facilities are limited to approximately 50 acres with general aviation, navigational aids, and maintenance facilities occupying the remaining property.

3.6.1 Airport Goals and Objectives

Airport owners, tenants, planners, designers, engineers, and architects share the responsibility of providing a facility with the best possible service to the public. The planning team is charged with ensuring that Asheville Regional Airport:

- Offers the best possible service to commercial, military, corporate, and private aviation users.
- Provides efficient and safe accommodations for its tenants and users.
- Meets the functional requirements of the area, its tenants and the traveling public.
- Takes into full account the future need to expand or modify the airport as a whole.

For additional information about the Asheville Regional Airport refer to the *Asheville Regional Airport Master Plan.*

3.7 TRANSPORTATION MANAGEMENT ELEMENT

3.7.1 Congestion Management Plan

Within the next two years the MPO will be developing a congestion management plan consisting of the following four components:

- Measurement and identification of congestion;
- A matrix of congestion mitigation strategies;
- Monitoring of effectiveness after implementation; and
- An orderly evaluation process.

In order to properly identify and quantify the status of congestion in an area, performance measures must be defined. Performance measures are operational characteristics, physical conditions, or other appropriate parameters, used as a benchmark to evaluate the adequacy of transportation facilities and estimate needed improvements. Various measures of congestion which may be used to identify the congested areas include:

- Volume to Capacity Ratio (v/c, maximum service flow rate)
- Level of Service Indicators (LOS, speed, delay, density)
- Travel Time Survey
- Transportation Modeling

Chapter 4 - FINANCIALLY CONSTRAINED PLAN

4.1 PRIORITIZED TRANSPORTATION IMPROVEMENT PLAN

The transportation plan has, as a minimum, a twenty-year horizon. To be truly effective, the plan has to be financially constrained, so as to provide realistic guidelines in developing proposed projects. Future elements, which may exceed the reasonably expected available dollars, may also be included as an extended vision for the plan, giving the public a more complete picture of the ultimate transportation system. The highway portion of the Long Range Transportation Plan is the most expensive element included. The following section will explain the methodology adopted in developing a reasonable and realistic financial plan for the Asheville Area Metropolitan Planning Organization Transportation Plan.

The City of Asheville's Transportation Division prepared funding projections for both the federal and state funding categories with the assistance of the NCDOT Statewide Planning and Program Development Branches. These projections were based on past allocations to projects in the AAMPO region with no change to reflect inflation or changes in funding allocations. No projections of local or private funding were used since no significant funds exist. Excluding the amount for project A-10, the total TIP amount for seven years would be $250,000,000. If this number is extrapolated over the horizon of the plan, then approximately $36,000,000 will be available for improvements each year. These funds do not include transit, aviation or rail improvements. The incidental rail, transit, pedestrian, bicycle, and aviation funding may be used for a variety of projects not yet identified. Incidental projects are typically constructed in conjunction with other TIP projects.

The plan divides the planning period into two horizon years: 2015 and 2025. This assists the community with prioritization and inclusion of the TIP projects.

Anticipated funding from 2008 to 2015 = $36M * 7 years = $252,000,000
Anticipated additional funding from 2015 to 2025 = $36M * 10 years = $ 360,000,000[15].

Proposed transportation projects are categorized into four groups:

1. Priority **ONE,** projects currently included in the FY 2002-2008 TIP.
2. Priority **TWO,** additional projects to be funded within the 2015 horizon.
3. Priority **THREE**, projects that, based on population, economic projections and land use, would need to be constructed and/or improved, but are not currently included in the TIP, and are fiscally constrained within the 2015 to 2025 time frame.
4. Priority **FOUR**, other projects included in the Thoroughfare Plan or other adopted plans but not funded

Projects programmed and scheduled for completion within the FY 2002-2008 Transportation Improvement Program were included in the Priority ONE list. The current MTIP functions as the fiscally constrained plan for the next seven years. The Priority Needs List as developed by the MPO was a critical element in determining priority two and three and four projects, which are fiscally constrained.

Table 6: PRIORITY ONE - FY 2002-2008 TIP PROJECTS

Please refer to the Appendices for an entire listing of the TIP. Note that Priority One projects are those that are currently funded and not listed as "Post Years".

Table 7: PRIORITY TWO - FY 2008-2015 TIP PROJECTS

PROJECT NO.	LOCATION AND DESCRIPTION	TOTAL ESTIMATED COST (THOU)	PRIOR COST	POSTYEAR PAST 2008 COST (In Thousands) Estimated & Uninflated	PERCENT OF PRIORITY TWO FUNDS
I-2500	I-40 TO NC 146 (EXIT 6), BRIDGE AND SAFETY IMPROVEMENTS AND PAVEMENT REHABILITATION (INCLUDES PARTS OF I-2705 AND I2706)	16612	8012	8600	3.41%
I-2501	NC 146 (Exit 6) TO SOUTH OF US 25 (EXIT 13). PAVEMENT REHABILITATION, BRIDGE AND SAFETY IMPROVEMENTS AND GUARDRAIL. (INCLUDES PART OF I-2706)	27237	837	26400	10.48%
I-2502	HAYWOOD COUNTY LINE TO WEST OF US 19-23-74 BRIDGE REHABILITATION.	9760	4460	5300	2.10%
I-2801	US 19-23-74 (EXIT 44) TO US 25a. PAVEMENT, BRIDGE REHABILITATION AND SAFETY IMPROVEMENTS.	34193	10193	24000	9.52%
I-4409	SR 2500 (BLUE RIDGE ROAD) AT BLACK MOUNTAIN. CONVERT GRADE SEPARATION TO INTERCHANGE.	10200	0	10200	4.05%
I-2513	ASHEVILLE, I-26 TO US 19-23-74. MULTI-LANE FREEWAY, PART ON NEW LOCATION.	179917	145117	34800	13.81%
R-4406	EAST-WEST SPLIT OF 19-23 WEST OF CANTON TO MULTI-LANES NEAR 151. WIDEN TO MULTI-LANES.	35000	17000	18000	7.14%
R-2813	NC 191 TO US 25. WIDEN TO MULTI-LANES WITH CURB AND GUTTER.	30430	19780	10650	4.23%
U-2801	US 25A (SWEETEN CREEK ROAD), US 25 (HENDERSONVILLE ROAD) TO ROBERTS ROAD. WIDEN TO MULTI-LANES.	40181	18281	21900	8.69%
U-3403	NC 191 (BREVARD ROAD/OLD HAYWOOD ROAD), NC 280 TO NC 112 (SARDIS ROAD). WIDEN TO MULTI-LANES.	42850	9050	33800	13.41%
U-4014	US 25 (MCDOWELL STREET) UPGRADE TUNNEL.	700	0	700	0.28%
U-4013	US 25 (MERRIMON AVENUE), I-240 TO SR 2330 (BEAVERDAM ROAD) OPERATIONAL IMPROVEMENTS	12000	0	12000	4.76%
N/A	RIVERFRONT CORRIDOR (Design)	7100	0	7100	2.82%
N/A	INCIDENTAL TRANSIT PROJECTS	10000	0	10000	3.97%
N/A	INCIDENTAL PEDESTRIAN PROJECTS	5000	0	5000	1.98%
N/A	INCIDENTAL BICYCLE PROJECTS	5000	0	5000	1.98%
N/A	INCIDENTAL AVIATION PROJECTS	5000	0	5000	1.98%
N/A	INCIDENTAL RAIL PROJECTS	6542	0	6542	2.60%
FS-0113D	ASHEVILLE SIGNAL SYSTEM IMPROVEMENTS	5000	0	5000	1.98%
	TOTAL			**252000**	100.00%

Table 8 : PRIORITY THREE - HIGHWAY PROJECTS FY 2015-2025 TIP PROJECTS

PROJECT NO.	ROAD LOCATION	Project Cost (In Thousands) Estimated & Uninflated	Percent Of Priority Three Funds
N/A	RIVERFRONT CORRIDOR	75000	20.83%
FS-0113A	I-40 AT ASHEVILLE TO NC 280. ADD ADDITIONAL LANES INCLUDING REVISIONS TO I-26/I-40/I-240 INTERCHANGE.	35000	9.72%
FS-0113B	SR 1220 (DOGWOOD ROAD). CONVERT GRADE SEPARATION TO AN INTERCHANGE.	25000	6.94%
E-4406	SWANNANOA RIVER GREENWAY, EAST SEGMENT. COUNTY RECREATIONAL PARK TO 74.	1500	0.42%
E-4407	AMBOY ROAD EXTENSION FROM AMBOY ROAD AT NC 191 INTERCHANGE TO THE FRENCH BROAD RIVER.	5000	1.39%
FS-9913D	SR 3556 (AMBOY ROAD-MEADOW ROAD), I-240 TO US 25 (BILTMORE AVENUE). WIDEN TO MULTI-LANES WITH NEW BRIDGE OVER THE FRENCH BROAD RIVER.	25000	6.94%
FS –0133B	I-240 IN ASHEVILLE TO SOUTH OF SR 2148 IN BUNCOMBE COUNTY. ADD ADDITIONAL LANES.	100000	27.78%
N/A	US 25 (WEAVERVILLE HIGHWAY) WIDEN TO THREE LANES WITH CURB AND GUTTER FROM ELKWOOD ROAD TO NEW STOCK ROAD.	10000	2.78%
N/A	FANNING BRIDGE ROAD. WIDEN TO INCLUDE WIDE OUTSIDE LANES.	12000	3.33%
N/A	SR 3116 (MILLS GAP ROAD) WIDEN FROM US 25 (HENDERSONVILLE ROAD) TO US 25A (SWEETEN CREEK ROAD)	8000	2.22%
N/A	NC 251 (RIVERSIDE DRIVE) WIDEN BETWEEN BROADWAY AVENUE AND CRAGGY PRISON WITH WIDE OUTSIDE LANES.	14500	4.03%
N/A	INCIDENTAL TRANSIT PROJECTS	15000	4.17%
N/A	INCIDENTAL PEDESTRIAN PROJECTS	8500	2.36%
N/A	INCIDENTAL BICYCLE PROJECTS	8500	2.36%
N/A	INCIDENTAL AVIATION PROJECTS	8500	2.36%
N/A	INCIDENTAL RAIL PROJECTS	8500	2.36%
	TOTAL	**360000**	100.00%

It is anticipated that construction of Priority THREE projects will be completed between FY 2015 and FY 2025.

Table 9: PRIORITY FOUR - HIGHWAY PROJECTS BEYOND FY 2025 (Unfunded)

ROAD LOCATION	Project Cost (In Thousands) Estimated & Uninflated	Percent Of Priority Four Funds
HAW CREEK ROAD - WIDEN BETWEEN TUNNEL ROAD AND SONLEY DRIVE	15000	3.69%
NC9 – WIDEN FROM 3RD STREET IN BLACK MOUNTAIN TO MONTREAT GATES	9500	2.34%
CANE CREEK ROAD – EXTEND SOUTH 1000 FEET FROM THE INTERSECTION OF OLD AIRPORT ROAD	4200	1.03%
BEAVERDAM ROAD – WIDEN TO TWO 14 FEET WIDE LANES FROM MERRIMON AVENUE TO CITY LIMITS WITH PROVISIONS FOR BICYCLES AND PEDESTRIANS.	20600	5.07%
REEMS CREEK ROAD (SR 1003) AND SOUTH MAIN STREET (SR 2127) – IMPROVE INTERSECTION	3800	0.94%
OVERLOOK ROAD – WIDEN FROM HENDERSONVILLE ROAD TO LONG SHOALS ROAD	18300	4.50%
BRIDGE 40 OVER HOMINY CREEK – WIDEN TO 3 LANES	5300	1.30%
OLD AIRPORT ROAD – UPGRADE TO FOUR LANES FROM US 25 TO CANE CREEK INDUSTRIAL PARK.	18000	4.43%
NORTH WOODFIN AVENUE – WIDEN FROM BROOKDALE ROAD TO WEAVERVILLE HIGHWAY	5500	1.35%
MILLS GAP ROAD – IMPROVE INTERSECTIONS FROM US 25A TO SR 3121 (PINNER'S COVE).	2500	0.62%
WEAVERVILLE HIGHWAY – REPLACE CULVERT NEAR WOODFIN AVENUE	500	0.12%
UNDERWOOD ROAD – IMPROVE FROM NEW SERVICE ROAD AT BREVARD CONNECTOR TO THE EXISTING PAVEMENT.	2500	0.62%
NEW HAW CREEK ROAD AT BEVERLY ROAD – REALIGN INTERSECTION	1000	0.25%
MCDOWELL STREET – WIDEN FROM VICTORIA ROAD TO THE TUNNEL.	8200	2.02%
CLARKS CHAPEL ROAD – WIDEN	5000	1.23%
MERRIMON AVENUE – FEASIBILITY STUDY TO LOOK AT WIDENING FROM NORTHERN WOODFIN CITY LIMITS TO MAIN STREET IN WEAVERVILLE.	200	0.05%
BROADWAY AND STATE STREET IN BLACK MOUNTAIN – REALIGN INTERSECTION.	500	0.12%
US 19/23 BYPASS/MONTICELLO ROAD INTERCHANGE – FEASIBILITY STUDY TO LOOK AT IMPROVING THE INTERCHANGE.	100	0.02%
SR 1541 – EXTEND FROM EXISTING PAVEMENT TO US 25.	2000	0.49%
OLD HOWARD GAP ROAD – UPGRADE FROM HOWARD GAP ROAD TO SR 1537	3500	0.86%
SR 1537 – UPGRADE FROM OLD HOWARD GAP ROAD TO US 25.	5200	1.28%
INCIDENTAL TRANSIT PROJECTS	50000	12.30%
INCIDENTAL PEDESTRIAN PROJECTS	25000	6.15%
INCIDENTAL BICYCLE PROJECTS	20000	4.92%
INCIDENTAL AVIATION PROJECTS	15000	3.69%
INCIDENTAL RAIL PROJECTS	15000	3.69%
INCIDENTAL ROADWAY PROJECTS	150000	36.91%
TOTAL	**406400**	100.00%

It is anticipated that construction of Priority FOUR projects will be completed after priority THREE projects have been completed.

4.2 ROADWAY MAINTENANCE

The maintenance of the State roadway system within the Urbanized area is the responsibility of the North Carolina Department of Transportation. The North Carolina General Assembly and the North Carolina General Statutes, Chapter 136. Roads and Highways control maintenance in this state.

Maintenance will continue to be addressed in the manner that is currently in place. For State-maintained roadways, NCDOT will be responsible for maintenance. Over the past eleven years (1990 to 2000) the yearly average spent on maintenance in Buncombe County has been approximately $10,000,000[16]. Due to the increased emphasis in the legislature on maintenance, it is anticipated that this expenditure will continue throughout the planning period, and perhaps increase slightly (note, for purposes of this discussion, inflation is not included in either costs or expenditures).

Maintenance allocations are divided into three groups: Primary, Secondary, and Urban:

- *Primary (G.S. 136-44.3 and 136-44.4)*
  Maintenance funds for the primary system are allocated on an annual basis by the General Assembly. Needs and costs are developed at the District level, combined into the Division needs and become part of the State Plan. Upon an allocation by the General Assembly, the funds are divided by Division and District.
- *Secondary (G.S. 136-44.5 , -44.6, -44.7, 44.8, -44.9 and –44.2A)*
  Secondary road maintenance funds are distributed to each County in accordance with G.S. 136-44.2A. Secondary roads needs are approved by the Board of County Commissioners.
- *Urban (G.S. 136-44.3)*
  Allocations are distributed to each Division based on each Division's ratio of urban mileage to State urban lane mileage and the Division's population to the total State population. Lane mileage and population are given equal weight.

Local municipalities rely heavily on Powell Bill funds secured from the state to accomplish maintenance of municipal roads. Municipalities who qualify can apply for Powell Bill funds. These funds are allocated in accordance with G.S. 136-176(b)(3), 136-41.1, 136-41.2 and 136-41.3.

Municipalities use these funds for maintaining, repairing, constructing, reconstructing or widening of any street or public thoroughfare. Use of these funds is contingent upon approval by the Municipalities' Governing Bodies. Currently counties in North Carolina are not eligible for Powell Bill funds.

In general, maintenance projects include the addition of paved shoulders where appropriate and constructible. Paved shoulders are beneficial to many modes of transportation, including vehicular, pedestrian, and bicycle.

4.3 PEDESTRIAN AND BICYCLE STRATEGIES

Most of the current bicycle and pedestrian projects proposed for this area accompany highway projects. The City of Asheville has provisions for sidewalk construction by developers included in its Unified Development Ordinance. Weaverville, Fletcher, and Black Mountain also have provisions for sidewalk construction in their development ordinances. Coordination among several governmental agencies and AAMPO, and exploration of alternative funding, can aid in the implementation of the AAMPO Pedestrian and Bicycle Plan. For additional information on bicycle and pedestrian funding see Section 3.3.5 of this plan.

4.4 TRANSIT STRATEGIES

The Asheville transit system currently receives Governors Apportionment funds through the Urbanized Area Formula Grant Program (Title 49 U.S.C. Section 5307). The Asheville Transit System uses section 5307 for operations as well as capital and preventive maintenance. With the institution of a Vehicle Registration Fee earmarked by the enabling legislation, local funds are used for both operating and capital purchases. The State of North Carolina also contributes significantly to the operating funds, and also matches certain capital purchases.

AAMPO also receives Discretionary Funds (Title 49 U.S.C. Section 5309) through the state of North Carolina. Budgets are usually prepared for a five year program. More detailed information is included in the Fiscal Year 2002-2008 Metropolitan Transportation Improvement Program.

With ever-changing local needs and regulations, the future of public transportation funds forecasting is very difficult. The need for a comprehensive regional transit system is a reality, but at a time when fiscal constraint is required by all jurisdictions, alternate funding sources must be explored.

4.5 RAIL STRATEGIES

The MPO is actively seeking funds to support a passenger rail system from the TIP and other funding sources. Currently the State has earmarked 3 million dollars to secure a passenger rail corridor and passenger station location.

4.6 AVIATION STRATEGIES

The Asheville Area Airport has developed funding strategies within the Airport Master Plan 2001. Please refer to the Airport Master Plan 2001 for more information.

4.7 SEVEN PLANNING FACTORS

Long Range Transportation Plans for urban areas must address a number of planning factors as established by federal legislation such as ISTEA and TEA-21. Described below are seven planning factors that are considered essential to long range transportation planning. Following each planning factor is a response that describes how the factor is being addressed in the AAMPO area.

Planning Factor I - Support the economic vitality of the Asheville Metropolitan Area, especially by enabling global competitiveness, productivity and efficiency.

A member of the Asheville Area Chamber of Commerce is a non-voting member of the Technical Coordinating Committee ensuring that economic entities are included in the transportation planning and decision making process. Additionally, the Sustainable Economic Development Plan encourages the concept of activity nodes and promotes new commercial ventures location in specific areas, ultimately enhancing economic viability of the region.

Planning Factor II - Increase the safety and security of the transportation system for motorized and non-motorized users.

The MPO Pedestrian and Bicycle Thoroughfare Plan promotes bicycle and pedestrian facilities throughout the AAMPO Area, increasing safety and facility options for non-motorized users. Additionally, the Pedestrian and Bicycle Coordinator for the MPO is a non-voting member of the Technical Coordinating Committee ensuring that non-motorized transportation users are integrated into the planning and decision making process. The Pedestrian and Bikeways Task Forces serve a citizen advisory role to the TAC with representation on the TCC.

The MPO has requested a feasibility study to look at ITS to provide additional items for consideration within the LRTP; potentially using video cameras and variable message signs to make the transportation network safer for all users.

Planning Factor III - Increase the accessibility and mobility options available to people and for freight.

Bicycle racks have been installed on all City buses; rail options are being planned including a full range of multi-modal connections; bicycle parking facilities are planned in key urbanized areas; and pedestrian facilities are being improved or constructed using recent TEA-21 funds. New transportation facility design continually takes ADA (Americans with Disabilities Act) into consideration, while all of the Asheville Transit buses are equipped with wheelchair lifts. Additionally, transit options will be expanded by the addition of more flexible service delivery in the low demand areas, and the increase of frequency along fixed routes in areas of high demand.

Planning Factor IV - Protect and enhance the environment, promote energy conservation, improve quality of life.

By providing and promoting several alternatives to single occupancy vehicle travel (pedestrian travel, bicycle travel, ride sharing, extended transit routes), and by encouraging and enabling the use of clean fuels, AAMPO will help to increase personal mobility and

decrease environmental degradation from mobile sources, thus improving quality of life. Also it will decrease the number of vehicles on roads, enhancing the environment and promoting energy conservation. Its partnership with local Parks and Recreation Departments will enable this region to expand non-motorized travel through greenway trails connected to the transportation infrastructure, while promoting a cleaner environment.

AAMPO previously was part of a pilot program for environmental analysis in long range transportation planning. The Phase I Environmental Analysis was developed as part of this process.

Planning Factor V - Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
Transit vehicles are equipped with bike racks and bicycle-parking facilities are being installed throughout the City. Transit Plans also include interfacing with rail service when it is established. This additional service can help to increase multi-modalism, while extending the transit service area.

Planning Factor VI - Promote efficient system management and operations
An efficient system will make maximum use of existing infrastructure. Rehabilitation and maintenance of existing facilities, as included in the highway and financial elements of the transportation plan, is a priority. The expansion of diverse transportation modes, as included in this plan, will provide AAMPO with more cost-effective means of transportation. The land dedication and reservation requirements along thoroughfares, as outlined in the local subdivision ordinances, ensure that property continues to be preserved for future expansion of thoroughfares. The ongoing cooperation among diverse jurisdictions within this region will continue to enhance the ability to share financial responsibilities in the operation of the existing and proposed transportation systems.

Planning Factor VII - Emphasize the preservation of the existing transportation system.
As described in Planning Factor 6, the usage and maintenance of existing facilities is a sound practice. Subdivision requirements to dedicate/reserve land along projected right-of-way expansions will ensure the preservation of the existing transportation system.

The integrated multi-modal Asheville Urban Area Metropolitan Planning Organization Transportation Plan, as approved by the Transportation Advisory Committee, is a dynamic, multi-faceted document that emphasizes the interconnectivity of all the elements of the plan.

4.8 CONCLUSION

In conclusion, AAMPO has the potential to enhance its transportation system. This LRTP presents a viable means to address existing and future needs. Concurrently, the citizenry needs to direct their local and state officials as to the character of urban structure they desire. It is our aspiration that this plan lays a foundation for future development of an efficient transportation network that is not only safe and efficient, but furnishes the citizens of Buncombe County with transportation options.

Chapter 5 – PUBLIC INVOLVEMENT

5.1 PUBLIC INVOLVEMENT PROCESS

TEA-21 required States and MPOs to significantly expand opportunities for the public to become involved in the metropolitan and statewide transportation planning processes. The Transportation Equity Act for the 21st Century (TEA-21) reaffirms the requirement for public involvement opportunities and also emphasizes Executive Order 12898 on Environmental Justice and the implementing U.S. Department of Transportation and Federal Highway Administration orders.

Metropolitan Planning Organizations are required to adopt and implement a proactive public involvement process that provides complete information, timely notice, and full access to key decisions. This process must also support early and continuing involvement of the public in developing plans and allow a comment period of not less than 45 days prior to modifying the process. TEA-21 also requires that a 30-day public comment period be provided prior to the approval or revision of any plan. In addition, MPOs must seek out and consider the needs of those individuals and groups that have been traditionally underserved by transportation systems. The AAMPO Policy Committee formally adopted its public involvement process on April 17, 2001.

5.2 ENVIRONMENTAL JUSTICE

Executive Order 12898 is a presidential directive to all federal agencies to make environmental justice a part of all programs, policies, and activities. The order was signed in 1994 and augments Title VI of the Civil Rights Act of 1964 by making the prohibition of discrimination based on race, color, and national origin more specific. The Executive Order addresses persons belonging to Black, Hispanic, Asian American, American Indian and Alaskan Native, and Low-income groups.

The intent of environmental justice is to improve transportation planning and decision-making by including all public groups in the planning process. Specifically, Metropolitan Planning Organizations are expected to enhance public participation in their area by eliminating participation barriers and engaging minority and low-income populations in making transportation decisions. To begin this process, the needs of these groups must be identified. This can be accomplished in part by identifying residential, employment, and transportation patterns of low-income and minority populations. By identifying these factors, impacts and benefits of transportation investments can be more equally distributed. To complete the process of identifying these needs, planning organizations must engage these groups in planning discussions and meetings to the extent practicable.
To help explain environmental justice, the Executive Order and the U.S. Department of Transportation present three fundamental principles. These principles are:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.

- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

AAMPO is attempting to meet these principles by examining the location of each of its transportation improvements to ensure that its transportation system adequately and appropriately benefits all groups of the region's population. AAMPO will expand on its work to comply with the Environmental Justice regulations utilizing data provided by the 2000 Census. The transportation system's effectiveness in serving the region's minority and low-income groups will be evaluated using the new census data as it becomes available by developing maps that show concentrations of the different segments of the population in the AAMPO region.

5.3 AAMPO TRANSPORTATION VISIONING PROCESS

The AAMPO Transportation Visioning process was developed to get the maximum input from its citizens regarding the Long Range Transportation Plan. Over 150 people attended 7 meetings held around the MPO area. Outside facilitators conducted the meetings. The meetings were advertised in all forms of news media. Over 1200 comments were received during these meetings. The comments are included in the appendix

ENDNOTES

[1] Stover, Vergil G. and Frank J. Koepke. *Transportation and Land Development.* 1988.

2 Population sources: Surveyed population for 1980, 1990, and 2000 is from the U.S. Bureau of the Census, Washington, D.C. Population projection to 2010 for Buncombe County is from the Office of State Planning, Raleigh, NC. Population for 2025 for Buncombe County is based on a 2020 projection from the Office of State Planning and a linear continuation of the growth rate for the five-year period of 2020 to 2025. Annual percent growth is calculated using simple interest formula. Some local officials were contacted for input.

[3] The 2000 estimates for employment were based on data received from InfoUSA. 2025 employment projections were developed by examining economic development trends for Western North Carolina.

[4] Transportation Research Institute, Oregon State University, 1996. Discussion Paper No. 4: Medians. Prepared for the Oregon Department of Transportation.

[5] Federal Highway Administration. Access Management. Resource Video.

[6] Transportation Research Institute, Oregon State University, 1996. Discussion Paper No. 4: Medians. Prepared for the Oregon Department of Transportation.

[7] Transportation Research Institute, Oregon State University, 1996. Discussion Paper No. 4: Medians. Prepared for the Oregon Department of Transportation.

[8]. Center for Livable Communities, 1999. Street Design Guidelines for Healthy Neighborhoods.

[9] The AAMPO Pedestrian and Bicycle Thoroughfare Plan, adopted 12/09/99.

[10] NC Office of State Planning, "North Carolina Municipal Population 1998," Raleigh, NC, 1999.

[11] USDA Natural Resource Conservation Center, *Natural Resources Inventory, 1997*. 2000. [www.nhq.nrcs.usda.gov/NRI/1997/].

[12] U.S. Census Bureau, 1950 through 1990 Census Publications [www.census.gov] .

[13] U.S. Federal Highway Administration. *Our Nation's Highways: Selected Facts and Figures.* FHWA-PL-98-015, 1998.

[14] NC Department of Health and Human Services, 1998.

[15] NCDOT, Program Development Branch. Funding levels derived from 2002-2008 TIP.

[16] NCDOT, Statewide Planning Branch. Funding average based on historical funding levels for maintenance in Buncombe County, 1990-2000.